

Application No. 09/868,971
Amendment dated August 16, 2004
Reply to Office Action dated March 19, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1, 2, 3, and 4 (canceled)

Claim 5 (currently amended): Wind machine mounted on a vertical mast (2) and having a wind-driven turbine (1) which is fitted with blades (6) mounted on a large-diameter hub (7) with a horizontal axis, and an alternator co-operating with the turbine (1) to generate electrical power and which is provided on the one hand with a magnetic rotor (4) secured to the hub (7), preferably on a level with the maximum available diameter, and on the other hand a magnetic coil stator (5) adjacent to the rotor (4) and secured to a stationary frame (22) joined to an encircling hood (9) extending the hub (7) coaxially to form a streamlined casing in which the alternator is housed, characterised in that the internal part of the hub (7) is provided with a flat ring (23) having a horizontal axis coinciding with the axis of rotation, the lateral faces (25, 25') and/or the internal (26) or external (57) peripheral edge of which co-operate with groups of runner wheels (27, 29, 29') having fixed shafts joined to the frame (22) to define a retaining and guide rail during rotation.

Claim 6 (currently amended): Wind machine as claimed in claim 5, characterised in that the flat ring (23) co-operates with braking means (31) of the disk brake type disposed between the groups of wheels (27, 29, 29').

Claim 7 (currently amended): Wind machine as claimed in claim 5, characterised in that the upstream end of the hood (9) contiguous with the rotating hub (7) is extended by a gutter (40) penetrating the interior thereof for collecting rain water.

Claim 8 (withdrawn): Wind machine mounted on a vertical mast (2) and having a wind-driven turbine (1) which is fitted with blades (6) mounted on a large-diameter hub (7) with a horizontal axis, and an alternator co-operating with the turbine (1) to generate electrical power and which is provided on the one hand with a magnetic rotor (4) secured to the hub (7), preferably on a level with the maximum available diameter, and on the other hand a magnetic coil stator (5) adjacent to the rotor (4) and secured to a stationary frame (22) joined to an encircling hood (9) extending the hub (7) coaxially to form a streamlined casing in which the alternator is housed, characterised in that the ends (55) of the blades (6) are shrouded by a relatively short, divergent, circular fairing (8), mounted integrally therewith and concentrically with the hub (7).

Claim 9 (withdrawn): Wind machine mounted on a vertical mast (2) and having a wind-driven turbine (1) which is fitted with blades (6) mounted on a large-diameter hub (7) with a horizontal axis, and an alternator co-operating with the turbine (1) to generate electrical power and which is provided on the one hand with a magnetic rotor (4) secured to the hub (7), preferably on a level with the maximum available diameter, and on the other hand a magnetic coil stator (5) adjacent to the rotor (4) and secured to a stationary frame (22) joined to an encircling hood (9) extending the hub (7) coaxially to form a streamlined casing in which the alternator is housed, characterised in that the blades (6) are shrouded in the vicinity of their ends (55) by a relatively short, divergent, circular fairing (8) mounted concentrically with the hub (7) and comprising a stationary element mounted on arms (41) joined to the frame (22) and co-operating with the ends (55) of the blades (6) at a slight clearance therefrom.

Claim 10 (withdrawn): Wind machine as claimed in claim 9, characterised in that the fairing (8) has a rounded leading edge (44) followed by a thick fairing (45) and a divergent, thin trailing edge (46).

Application No. 09/868,971
Amendment dated August 16, 2004
Reply to Office Action dated March 19, 2004

Claim 11(withdrawn): Wind machine mounted on a vertical mast (2) and having a wind-driven turbine (1) which is fitted with blades (6) mounted on a large-diameter hub (7) with a horizontal axis, and an alternator co-operating with the turbine (1) to generate electrical power and which is provided on the one hand with a magnetic rotor (4) secured to the hub (7), preferably on a level with the maximum available diameter, and on the other hand a magnetic coil stator (5) adjacent to the rotor (4) and secured to a stationary frame (22) joined to an encircling hood (9) extending the hub (7) coaxially to form a streamlined casing in which the alternator is housed, characterised in that the blades (6) are helical blades inclined towards the upstream end at an angle of between 30° and 45° and dimensioned so that the swept diameter is approximately twice or four times that of the hub (7) or the hood (9).

Claims 12 and 13 (canceled)

Claim 14 (currently amended): Wind machine as claimed in claim ~~3~~ 16, ~~characterised in that at its upstream end contiguous with the rotating hub (7), the hood (9) is extended by a gutter (40) penetrating~~ including a gutter, said gutter comprising an extension of said stationary member and extending into the interior of the latter said hood to collect rain water.

Claim 15 (currently amended): Wind machine as claimed in claim 6, characterised in that the upstream end of the hood ~~(9)~~ contiguous with the rotating hub ~~(7)~~ is extended by a gutter ~~(40)~~ penetrating the interior thereof for collecting rain water.

Claim 16 (new): A wind machine mounted on a vertical mast, said wind machine comprising a stationary frame, a hub rotatably mounted on said frame and having a horizontal axis, a wind-driven turbine including blades mounted on said hub, an alternator operatively connected to said turbine for generating electrical power, said alternator comprising a rotor fixed to said hub on a level with the maximum available hub diameter, a stator coil disposed adjacent the rotor and secured to said stationary frame, a hood secured to said frame and coaxially extending said hub

to form a streamlined casing in which the alternator is disposed, said hood having an upstream part and a downstream part, said upstream part including an aerodynamic nose for shrouding the bases of the blades, said downstream part extended by a stationary encircling member which is secured to said frame, said aerodynamic nose including a wind inlet orifice which communicates with a water-separating enclosure and a duct for guiding cooling air to said alternator.

Claim 17 (new): A wind machine mounted on a vertical mast, said wind machine comprising a stationary frame, a hub rotatably mounted on said frame and having a horizontal axis, a wind-driven turbine including blades mounted on said hub, an alternator operatively connected to said turbine for generating electrical power, said alternator comprising a magnetic rotor fixed to said hub on a level with the maximum available hub diameter, a magnetic stator coil disposed adjacent the rotor and secured to said stationary frame, a hood secured to said frame and extending said hub coaxially to form a streamlined casing in which the alternator is disposed, said hood having an upstream part and a downstream part, said upstream part including an aerodynamic nose and shrouding the bases of the blades, said downstream part extended by a stationary encircling member which is secured to said frame, and a gutter comprising an extension of said hood disposed upstream, contiguous with, and inside said hub.

Claim 18 (new): A wind machine mounted on a vertical mast, said wind machine comprising a stationary frame, a hub rotatably mounted on said frame and having a horizontal axis, a wind-driven turbine which is fitted with blades mounted on said hub, an alternator operatively connected to said turbine for generating electrical power, said alternator comprising a magnetic rotor fixed to said hub on a level with the maximum available hub diameter, a magnetic stator coil disposed adjacent the rotor and secured to said stationary frame, a hood secured to said frame and extending said hub coaxially to form a streamlined casing in which the alternator is disposed, said hood having an upstream part and a downstream part, said upstream part including an aerodynamic nose and shrouding the bases of said blades, said downstream part extended by a stationary encircling bell-shaped member which is secured to said frame and which is contiguous

Application No. 09/868,971
Amendment dated August 16, 2004
Reply to Office Action dated March 19, 2004

with said hood, said aerodynamic nose including a wind inlet orifice which communicates with a water-separating enclosure and a duct for guiding cooling air to said alternator.

Claim 19 (new): A wind machine mounted on a vertical mast, said wind machine comprising a stationary frame, a hub rotatably mounted on said frame and having a horizontal axis, a wind-driven turbine which is fitted with blades mounted on said hub, an alternator operatively connected to said turbine for generating electrical power, said alternator comprising a magnetic rotor fixed to said hub on a level with the maximum available hub diameter, a magnetic stator coil disposed adjacent the rotor and secured to said stationary frame, a hood secured to said frame and extending said hub coaxially to form a streamlined casing in which the alternator is disposed, said hood having an upstream part and a downstream part, said upstream part including an aerodynamic nose and shrouding the bases of the blades, said downstream part extended by a stationary encircling bell-shaped member which is secured to said frame and which is contiguous with said hood, and a gutter comprising an extension of said hood disposed upstream, contiguous with, and inside said hub.